



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/801,234	03/16/2004	Fu-Hsin Chen	24061.79	2028
42717	7590	06/08/2005		
HAYNES AND BOONE, LLP 901 MAIN STREET, SUITE 3100 DALLAS, TX 75202			EXAMINER DICKEY, THOMAS L	
			ART UNIT	PAPER NUMBER
			2826	

DATE MAILED: 06/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/801,234

Applicant(s)

CHEN ET AL.

Examiner

Thomas L. Dickey

Art Unit

2826

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 April 2005.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
4a) Of the above claim(s) 1-7 and 12-16 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 8 and 9 is/are rejected.
7) ☒ Claim(s) 10 and 11 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/16/04.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Art Unit: 2826

DETAILED ACTION

1. The amendment filed on 04/14/05 has been entered.

Election/Restriction

2. Applicant's election of Group II, claims 8-11 in the Paper filed 04/14/05 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Oath/Declaration

3. The oath/declaration filed on 06/17/04 is acceptable.

Drawings

4. The formal drawings filed on 06/17/2004 are acceptable.

Priority

5. Applicants have made no claim for priority.

Art Unit: 2826

Information Disclosure Statement

6. The Information Disclosure Statement filed on 03/16/2004 has been considered.

Specification

7. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 8 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by HO-SHINO ET AL. (2001/0012671).

Hoshino et al. discloses a high-voltage MOS transistor comprising a substrate 1; a gate structure composed of a gate 7, a gate dielectric layer 6, and a gate spacer (the unnumbered cross-hatched region seen beside the unnumbered gate in figure 14a)

Art Unit: 2826

overlying the substrate 1, the gate structure having a first side and a second side opposite to the first side; a first doping region 8 (Hoshino et al. call this the "offset region," as is common practice) with a first dosage formed in the substrate 1 on the first side of the gate structure and partially covered by the gate structure; a drain region 10 (a second doping region with a second dosage formed within the first doping region 8) adjacent to the edge on the first side of the gate structure; a source region 9 (a third doping region with the second dosage formed in the substrate 1) adjacent to the edge of the second side of the gate structure; and a channel region 5 formed in the substrate 1 between the first and third doping regions by turning on the high-voltage MOS transistor to pass current between the source and drain region 10s. Note figures 1, 14A and paragraphs 0135-0140 and 0211 of Hoshino et al.

Applicants are asked to next direct their attention to figures 32 and 36, and paragraphs 0256 and 0259 of Hoshino et al. In figure 32 Hoshino et al. show the on resistance increasing linearly with increasing gate (gate length being proportional to channel length) length. The slope of Hoshino et al.'s plot of on resistance versus gate length defines a resistance per unit length of Hoshino et al.'s channel region. In figure 36 Hoshino et al. show the on resistance increasing linearly with increasing offset region (Hoshino et al.'s "first doping region") length. The slope of Hoshino et al.'s plot of on resistance

Art Unit: 2826

versus offset length defines a resistance per unit length of Hoshino et al.'s first doping region. Note that the two slopes are substantially equal. Hoshino et al. thus discloses that a resistance per unit length of the channel region is substantially equal to a resistance per unit length of the first doping region.

Allowable Subject Matter

9. Claims 10 and 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

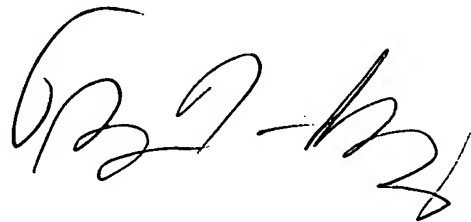
Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas L Dickey whose telephone number is 571-272-1913. The examiner can normally be reached on Monday-Thursday 8-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan J Flynn can be reached on 571-272-1915. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2826

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'T. L. Dickey', is positioned above the printed name.

Thomas L. Dickey
Patent Examiner
Art Unit 2826
05/05